UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TX 75202-2733

APR 2 0 2018

CERTIFIED MAIL 7014 0150 0000 2452 5455 RETURN RECEIPT REQUESTED

Ms. Alicia Matus
Site Manager
Equistar Chemicals, LP
Corpus Christi Complex
P.O. Box 10940
Corpus Christi, TX 78460-0940

RE: Equistar Chemicals, LP (Equistar)
Petition Reissuance Final Approval Decision for WDW-152 and WDW-153

Dear Ms. Matus:

The land disposal restrictions prohibit the injection of hazardous waste unless a petitioner can demonstrate to EPA, to a reasonable degree of certainty, that there will be no migration of hazardous constituents from the injection zone for as long as the wastes remain hazardous. The land disposal restrictions for injection wells codified in 40 CFR Part 148 provide the standards and procedures by which petitions to dispose of an otherwise prohibited waste by injection will be reviewed and by which exemptions pursuant to these petitions will be granted or denied. Part 148 also provides for the reissuance of an exemption if the reissuance complies with the above-mentioned standards.

A letter dated February 16, 2018, informed Equistar that EPA was proposing to approve its petition reissuance request for an exemption to the land disposal restrictions. The public comment period associated with this decision began on February 26, 2018, and closed on April 13, 2018, and no comments were received.

Based on a detailed technical review of the petition reissuance request and support documents, EPA has determined that this information for the Equistar site meets the requirements of 40 CFR Part 148 by demonstrating that, to a reasonable degree of certainty, there will be no migration of hazardous constituents from the injection zone for 10,000 years.

The following are conditions of this land disposal restrictions exemption reissuance.

Petition Reissuance Final Approval Conditions

This approval of a petition for reissuance of an exemption to allow the continued injection of restricted hazardous wastes is subject to the following conditions, which are necessary to assure that the standard in 40 CFR §148.20(a) is met. Noncompliance with any of these conditions is grounds for termination of the exemption in accordance with 40 CFR §148.24(a)(1). This exemption is applicable to the Equistar injection wells WDW-152 and WDW-153, located at the Corpus Christi Complex in Corpus Christi, Texas.

1. Injection of restricted waste shall be limited to the following injection zone:

| Well | Depth of Injection Zone |
|---|---|
| WDW-152 | 5860' - 7468'[1] |
| WDW-153 | 5860' - 7450'[2] |

([1]WDW-152 Injection Zone depths are referenced to Kelly Bushing (KB) depths on WDW-152's Dresser Atlas Combination Induction Electrolog BHC Accoustilog dated 3/27/79 for 14 3/4 inch borehole and 6/15/79 for 9 7/8 inch borehole - KB depth is 15' above ground level)
([2]WDW-153 Injection Zone depths are referenced to Kelly Bushing (KB) depths on WDW-153's Dresser Atlas Combination Induction Electrolog BHC Accoustilog dated 5/12/79 - KB depth is 15' above ground level)

The injection interval shall be defined by the following correlative log depths:

| Well | Injection Interval | Depth of Injection |
|---|---|---|
| WDW-152 | Frio Formation | 7130' - 7468'[1] |
| WDW-153 | Frio Formation | 7130' - 7450'[2] |

([1]WDW-152 Injection Zone and Injection Interval depths are referenced to Kelly Bushing (KB) depths on WDW-152's Dresser Atlas Combination Induction Electrolog BHC Accoustilog dated 3/27/79 for the 14 3/4 inch borehole and 6/15/79 for the 9 7/8 inch borehole - KB depth is 15' above ground level)
([2]WDW-153 Injection Interval depths are referenced to Kelly Bushing (KB) depths on WDW-153's Dresser Atlas Combination Induction Electrolog BHC Accoustilog dated 5/12/79 - KB depth is 15' above ground level)

2. For WDW-152 and WDW-153, the combined cumulative monthly volume injected into the Frio Formation injection interval shall not exceed that calculated as follows:

Frio Formation: (200 gpm)(1440 minutes/day)(number of days in that month)

For WDW-152, the cumulative monthly volume injected into the Frio Formation injection interval shall not exceed that calculated as follows:

WDW-152: (110 gpm)(1440 minutes/day)(number of days in that month)

3. The facility shall cease injection into WDW-152 and WDW-153 by December 31, 2045

4. The characteristics of the injected waste stream shall for WDW-152 and WDW-153 at all times conform to those discussed in Section 5 entitled "Injection Fluids" of the 2017 Petition Reissuance document for WDW-152 and WDW-153. The surface density range of the waste stream shall remain with the range of 1.03 to 1.15 g/cm$^3$ at a surface temperature and pressure of 60$^0$F and 1 atmosphere equivalent to a surface specific gravity range of 1.03 to 1.15 also at a surface temperature and pressure of 60$^0$F and 1 atmosphere with a reference temperature of 60$^0$F.

For the purpose of the above calculation, each day's specific gravity value shall be obtained by at least one representative grab sample for the injection interval.

5. This approval for injection is limited to the following hazardous wastes:

   D002, D003, D009, D018

6. The facility must petition for approval to inject additional hazardous wastes which are not included in Condition No. 5, above. The facility must also petition for approval to increase the concentration of any waste which would necessitate the recalculation of the limiting concentration reduction factor and the extent of the waste plume. Petition reissuances and modifications should be made pursuant to 40 CFR §148.20 (e) or (f).

7. Equistar shall annually submit to EPA the results of bottomhole pressure surveys for WDW-152 and WDW-153. These surveys shall be performed after shutting in each well for a period of time sufficient to allow the pressure in the injection interval to reach equilibrium, in accordance with §146.68(e)(1). The annual report should include a comparison of reservoir parameters determined from the falloff test with parameters used in the approved no migration petition. This should include a comparison of the current year's test results for the static and flowing bottomhole pressures with the values demonstrated in the approved petition reissuance and a comparison of the test results for transmissibility [Kh/μ (mD-ft/cP)] with the transmissibilities used in the approved petition reissuance demonstration for the pressure buildup and 10,000 year plume modeling.

8. Equistar shall also annually submit to EPA radioactive tracer survey and annulus pressure tests for WDW-152 and WDW-153 as well as an annual waste sample analysis for the injectate constituents identified in Table 5-1 of the 2017 reissuance document.

9. Equistar shall notify EPA in the event that WDW-152 or WDW-153 loses mechanical integrity, prior to any well work on WDW-152 or WDW-153, or if Equistar plans to plug WDW-152 or WDW-153. If any well work or plugging is being planned, Equistar shall also submit the procedures to EPA for review prior to commencing any work.

10. Upon the expiration, cancellation, reissuance, or modifications of the Texas Commission on Environmental Quality Underground Injection Control permit for WDW-152 or WDW-153, this exemption is subject to review. A new demonstration may be required if information shows that the basis for granting the exemption is no longer valid under 40 CFR §148.23 and §148.24.

In addition to the above conditions, this approval of a petition for reissuance of an exemption is contingent on the validity of the information submitted in the Equistar petition reissuance request for an exemption to the land disposal restrictions. Any final reissuance decision is subject to termination when any of the conditions occur which are listed in 40 CFR §148.24, including noncompliance, misrepresentation of relevant facts, or a determination that new information shows that the basis for approval is no longer valid.

If you have any questions or comments, please call Brian Graves at (214) 665-7193 or email him at graves.brian@epa.gov.

Sincerely yours,

for David F. Garcia, P.E.
Acting Director
Water Division

ecc: Mr. David Harvey, Equistar
Ms. Lorrie Council, TCEQ
Mr. Richard Heitzenrater, TCEQ Region 14